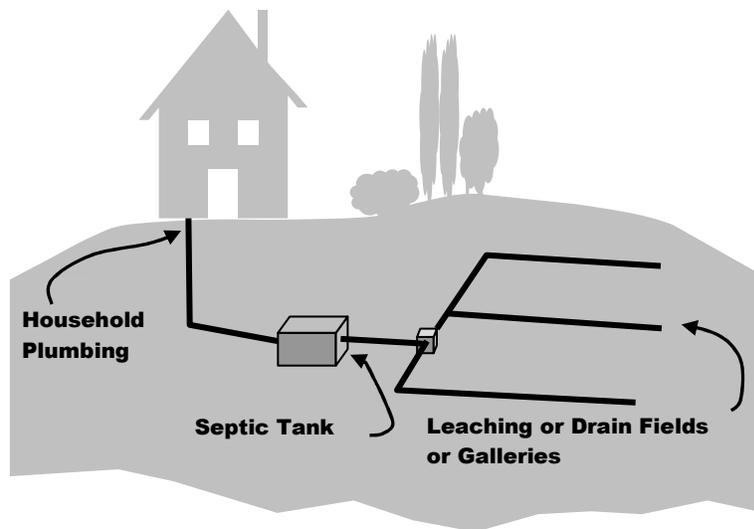


A Guide to the Operation and Maintenance of your **On-Site Septic System**



Stewardship of Our City's *Environmental Quality*

Guide #031

Sponsored by the
Norwalk Conservation Commission

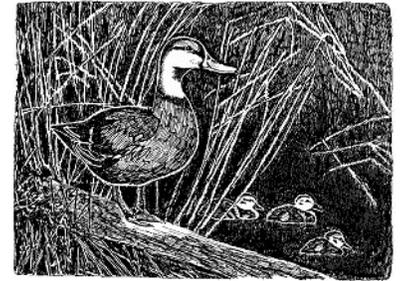
On-Site Septic System vs. Sewer

Treating sewage is everyone's responsibility. It is a responsibility that is too frequently forgotten, generally because it is out-of-sight, underground, and, well, it is just isn't pretty.

Residents connected to the City's sanitary sewer system have their sewage treated at the municipal treatment plant. People with homes that have an on-site septic system own, operate and maintain their own small-scale treatment plants.

Why We Need Good Systems

Sewage contains bacteria, viruses, excess nutrients and other potent pathogens. Without adequately functioning septic systems these contaminants would enter surface waters (our rivers, brooks, ponds, and beaches) and groundwater (often our drinking water source!) and cause extreme pollution – which greatly increases health risks to humans and wildlife.



This pollution would make lakes and beaches unsafe and unavailable for recreation – including swimming, wading and fishing. Excess nutrients in ponds and streams promote algae and weed growth, potentially leading to algal blooms and fish kills. Allowing poorly-treated sewage to enter groundwater, which is used for drinking water in homes with on-site wells, increases the pollutants in our drinking water supply. Hepatitis, dysentery, methemoglobinemia (blue-baby syndrome) and other diseases may result from bacteria and viruses in drinking water. Pollution and degradation of our water resources decreases the quality of life in our neighborhood and causes property values to plummet.

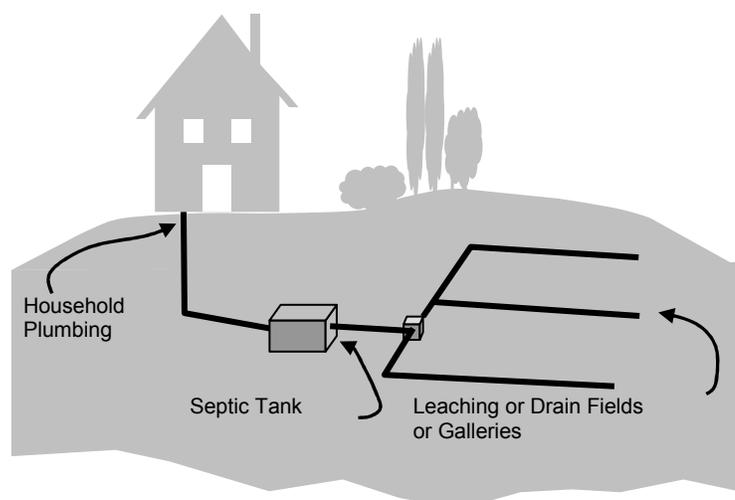
In order to provide effective, efficient and safe treatment of sewage, on-site septic systems must be properly operated and maintained. As a homeowner, you have a *tremendous* impact on the efficiency and longevity of your septic system.

This pamphlet discusses routine maintenance and operation guidelines (a little common sense) that can help keep your septic system, a considerable investment, properly functioning for as long as possible!

How it Works

In order to maintain your septic system it is helpful to understand the basics of how it functions. There are three basic components to your septic system:

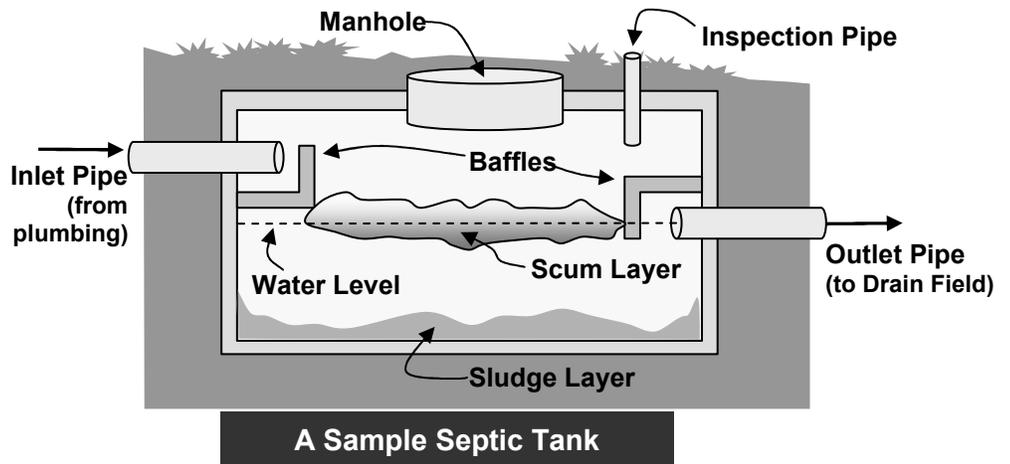
- 1. Household Plumbing.**
- 2. Septic Tank**
- 3. Leaching Fields or Galleries.**



1. The plumbing. All household wastewater (containing mostly water, as well as human wastes, nutrients, dirt, and other contaminants) must be collected and directed to a single effluent pipe that connects to the rest of the septic system. Everything that goes down the drain must be processed by your septic system. EVERY time you use water in your home, you put your septic system to work.

2. The septic tank. The septic tank is a sealed, solid tank designed to accept all wastewater from the home. Naturally-occurring bacteria in the wastewater begin to break down organic materials in the tank. This action provides the 'primary treatment' of sewage. The contents of the septic tank separate into three layers:

- ❑ Floating scum layer - soaps, greases & oils, toilet paper, etc.
- ❑ Liquid layer - water, liquid, and suspended solids.
- ❑ Sludge - heavy organic and inorganic materials at the bottom of the tank.



The septic tank is designed to retain the floating and sludge layers. Only the liquid layer should be passed into the next system component.

3. The leaching field. This is the powerhouse of the system. Whenever wastewater enters the tank, an equal amount is moved into the drain field. Sewage flows into perforated pipe or concrete galleries that allow wastewater to permeate into the soil. Final treatment of sewage occurs in the soil. There are millions of naturally-occurring beneficial microscopic organisms in every tablespoon of soil. These organisms are essential to the final removal of nutrients and disease-causing organisms in wastewater.

What Can I Do?

The effectiveness and longevity of your septic system greatly depends on how **YOU** operate and maintain the system.

Use & Operation

Every time you use water in your home, you put your system to work.

Consider the following.

- ❑ **Conserve water!** Using less water reduces the load on your system.
 - ❑ About 60% of water used comes from the bathroom (nearly 70 gal./day!). Think about taking shorter showers and not running the tap while brushing teeth or shaving.
 - ❑ Fix leaking faucets and toilets.

- ☐ Install new water-efficient appliances, such as low-flow toilets & shower heads and front-loading washing machines.
- ☐ Wash only full loads in the dishwasher and washing machine.
- ☐ Large volumes of water entering the system in a short period of time may lead to clogging of the leaching fields and failure of your system. Spread your laundry washing throughout the week.

- ☐ **What you pour down the drain** affects how well your system works. Do not treat the system like a trash can. Do not introduce toxins that will kill off the beneficial bacteria in your leaching fields. Limit the amount of non-liquids entering the system. Consider:
 - ☐ Utilize the annual Household Hazardous Waste Collection. Do not pour paints, solvents, gasoline, antifreeze or other hazardous materials down the drain!
 - ☐ Use the minimum amount of detergent or cleanser to do the job. Consider alternative, non-toxic cleaning solutions.
 - ☐ Do not use a garbage disposal or put food, fat, oil or coffee grounds down the drain.

- ☐ **Protect your leaching field.** Consider:
 - ☐ The beneficial bacterial need air to function and survive. Don't inundate the area with too much water.
 - ☐ Roof gutters should direct rainwater away from the fields.
 - ☐ Soil compaction negatively impacts the fields. Do not drive or place heavy machinery on the fields.

Maintenance

Even a properly designed and thoughtfully operated septic system will eventually fail unless sludge and floating scum are periodically pumped from the **tank**.

The sludge and floating scum layers that accumulate in your septic tank **MUST** periodically be removed. The frequency of cleaning depends on a variety of factors.

As a rule of thumb, a typical septic tank should go no more than 36 months between cleanings!

If either floating scum or sludge enters the drainfield it will cause expensive, and often irreparable, damage. Cleaning, or pumping, the septic tank involves hiring a licensed professional to open the tank's manhole to suction out the material that in the septic tank. This requires pumping, flushing and back-flushing several times. Septic tanks have a finite volume that they can hold. If a tank is not pumped, solids get passed into the leaching fields. The fields are not designed to dispose of non-liquids, and they will likely clog and cause a system failure.

The dollars spent every one to three years on proper cleaning is much less expensive, and easier to plan for, than an unexpected \$2,000.00 to \$22,000.00 repair or replacement bill!

Remember...

Attentive maintenance of your septic system and thoughtful water-use are the most critical steps you can personally take to extend the efficiency and life of your septic system.